

NAME

ng_vlan - IEEE 802.1Q VLAN tagging netgraph node type

SYNOPSIS

```
#include <sys/types.h>
#include <netgraph.h>
#include <netgraph/ng_vlan.h>
```

DESCRIPTION

The **vlan** node type multiplexes frames tagged according to the IEEE 802.1Q standard between different hooks.

Each node has two special hooks, *downstream* and *nomatch*, and an arbitrary number of "vlan" hooks, each associated with a particular VLAN tag.

An ETHERTYPE_VLAN frame received on the *downstream* hook with a tag that the node has been configured to filter is sent out the corresponding "vlan" hook. If it does not match any of the configured tags, or is not of a type ETHERTYPE_VLAN, it is sent out the *nomatch* hook. If the *nomatch* hook is not connected, the packet is dropped.

An Ethernet frame received on the *nomatch* hook is passed unmodified to the *downstream* hook.

An Ethernet frame received on any of the "vlan" hooks is tagged accordingly and sent out the *downstream* hook.

HOOKS

This node type supports the following hooks:

<i>downstream</i>	Typically this hook would be connected to a ng_ether(4) node, using the <i>lower</i> hook.
<i>nomatch</i>	Typically this hook would also be connected to an ng_ether(4) type node using the <i>upper</i> hook.
<any valid name>	Any other hook name will be accepted and should later be associated with a particular tag. Typically this hook would be attached to an ng_eiface(4) type node using the <i>ether</i> hook.

CONTROL MESSAGES

This node type supports the generic control messages, plus the following:

NGM_VLAN_ADD_FILTER (addfilter)

Associates a hook with the tag.

NGM_VLAN_DEL_FILTER (delfilter)

Disassociates a hook from the tag.

NGM_VLAN_GET_TABLE (gettable)

Returns a table of all hook/tag associations.

EXAMPLES

```
#!/bin/sh
```

```
ETHER_IF=r10
```

```
ngctl -f- <<EOF
shutdown ${ETHER_IF}:
mkpeer ${ETHER_IF}: vlan lower downstream
name ${ETHER_IF}:lower vlan
connect ${ETHER_IF}: vlan: upper nomatch
EOF
```

```
ngctl mkpeer vlan: eiface vlan123 ether
ngctl msg vlan: addfilter '{ vlan=123 hook="vlan123" }'
```

SHUTDOWN

This node shuts down upon receipt of a NGM_SHUTDOWN control message, or when all hooks have been disconnected.

SEE ALSO

netgraph(4), ng_eiface(4), ng_ether(4), ngctl(8), nghook(8)

HISTORY

The **ng_vlan** node type appeared in FreeBSD 4.10.

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